

Superfund Records Center

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FIVE-YEAR REVIEW REPORT

Auburn Road Landfill, Operable Unit 1

(Alternative Water Supply)

Londonderry, New Hampshire

Prepared By:

U.S. Environmental Protection Agency

Region I

Boston, Massachusetts

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Date

## I. BACKGROUND

Section 121 (c) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requires that periodic (at least once every five years) reviews be conducted for sites where hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use or unrestricted exposure following the completion of all remedial actions for the site. The purpose of such a review is to determine the continued adequacy of the remedial actions implemented to provide protection of human health, welfare and the environment. The Five-Year Review is to be conducted by the lead Agency, which is the Environmental Protection Agency (EPA), on the Auburn Road Landfill Operable Unit 1 - Alternate Water Supply.

The EPA guidance (OSWER Directive 9355.7-02) developed for Five-Year Reviews provides for three levels of review based on site specific considerations, including the nature of the response action, the status of on-site response activities, proximity to populated areas and sensitive environmental areas and the interval since the last review was conducted. Level I is the first level of evaluation and EPA anticipates that it is appropriate in all but a relatively few cases where site specific circumstances suggest another level, either at the outset of the review or if findings during the course of the review indicate the need for further analysis. The Five-Year Review conducted for the Auburn Road Landfill Site, Operable Unit 1, was a Level I review.

## II. SITE HISTORY AND CONDITIONS

The Auburn Road Landfill Site (Site) is located in the Town of Londonderry, New Hampshire. The Site consists of approximately 200 acres on which there are four disposal areas.

From approximately 1965 until 1980 the Site operated as a municipal landfill. Prior to this, the Site operated as a private sand and gravel mining operation.

On September 8, 1983, the Site was listed on the National Priority List, ranking 383 out of 416 sites nationally.

A Remedial Investigation, conducted by EPA in 1985 and 1986, concluded that the Site contained buried drums of hazardous substances. These buried drums were deteriorating and releasing the hazardous substances into the groundwater below the Site.

In May and June of 1986, EPA began excavating and removing barreled wastes from the Site. Approximately 1900 barrels were excavated and removed from the Site. As result of this action, the source control and management of migration alternatives under investigation for the Site needed to be re-evaluated. Rather than delay installation of an alternative water supply for the affected area pending re-evaluation of the source control and

management of migration alternatives, EPA decided to split the response actions into operable units.

### III. SUMMARY OF RESPONSE ACTION (WATER LINE CONSTRUCTION)

The objective of Operable Unit One (construction of a water line) is to prevent ingestion of contaminated groundwater by providing an alternative water supply to residences potentially affected by the contaminated groundwater plume. Approximately 86 volatile and semi-volatile organic compounds were detected in monitoring wells either on or down gradient from the Site. Tetrachloroethylene and trichloroethylene were among the compounds detected at concentrations as high as 8,500 and 1,600 parts per billion (ppb) respectively. Low levels of contamination were also detected in residential supply wells down gradient from the Site (60 ppb). These supply wells provided water for approximately 500 residents of a nearby mobile home park. Although only low levels of contamination were detected in the supply wells, the wells were very close to the main plume of contamination. There were also many other residences in close proximity to the Site which rely on bedrock wells for drinking water and which could potentially be affected by the groundwater contamination.

In July 1986 EPA issued a Focused Feasibility Study (FFS) which evaluated various alternative water supply remedies. The FFS evaluated three remedial alternatives plus a no action alternative. The three alternatives included extension of an existing water line, installing a new well field and distribution system and, wellhead treatment. After careful consideration, EPA concluded that extension of an existing water line was the most cost effective alternative for providing an alternate source of water to the residents of the mobile home park and for the homes along Auburn Road adjacent to the landfill. This determination was formalized in a Record of Decision issued on September 17, 1986.

### IV. POST RESPONSE ACTION ACTIVITIES

On February 18, 1987, EPA issued an Administrative Order (Order) to the Town of Londonderry, one of the identified Potentially Responsible Parties (PRPs) at the Site. The Order required the Town to design and construct the water line described in the 1986 ROD. The Order also required the owner of the property, another identified PRP, to erect a fence around the source areas at the Site. By November 1987, the water line was installed and operational and the fence erected.

Following construction of the water line, EPA continued with a Supplemental Remedial Investigation to determine how the site conditions changed as result of the barrel removal operation. On March 17, 1989, EPA issued the Supplemental Remedial Investigation Report and a Feasibility Study which evaluated various alternatives addressing both source control and

management of migration Remedial Actions. At this time EPA also issued its Proposed Plan which outlined the Agency's recommended alternative for Remedial Action. On September 29, 1989, EPA issued its second Record of Decision. The second ROD selected the Remedial Action for protection of human health and the environment consisting of a multi-layered cap for the source control component and a groundwater pump and treatment option for the management of migration component. On August 31, 1990, EPA issued an Administrative Order to nine PRPs for design and construction of the Remedial Actions described in the 1989 ROD. To date, Pre-Design Studies for both the source control and management of migration components of the Remedial Action are complete. Based on groundwater sampling conducted during the Pre-Design studies, groundwater contamination at the Site has significantly improved since the ROD was issued. Of the nine contaminants of concern listed in the 1989 ROD, arsenic is the only contaminant at the Site that still exceeds its cleanup standard.

The PRPs are preparing the preliminary design for the cap portion of the Remedial Action. Construction of drainage improvements, in anticipation of capping, is expected to begin in the summer of 1993. Construction of the multi-layered caps is expected to begin no later than the summer of 1994. The PRPs are also completing additional studies to reduce the level of arsenic in the groundwater. These additional studies are scheduled to be complete by spring 1993.

#### V. SCOPE AND NATURE OF THE FIVE-YEAR REVIEW

The guidance developed by EPA for Five-Year Reviews, OSWER Directive 9355.7-02, discusses three levels of review. This initial Five-Year Review for the Auburn Road Landfill is a Level I Review, which is the least intensive, because it is very unlikely the water line completed for this Site is no longer protective.

The Site has been visited numerous times during the field work for the Supplemental Remedial Investigation and also during the field work for the Pre-Design activities. The extent of the plume of contaminated groundwater has not changed since completion of the water line. Therefore, there is no need to extend the water line to serve other residents near the Site. Also, there has been no new development along Auburn Road adjacent to the Site, so no new homes need to be connected to the water line. Since issuing the second ROD in September 1986, EPA has also conducted six public informational meetings in Londonderry to discuss various aspects of the Remedial Actions. No one at these meetings has indicated any dissatisfaction with the water line or the water supplied by the water line. Therefore, EPA has no reason to believe that the water line is not still protective. EPA has consulted with the New Hampshire Department of Environmental Services during development of this Five-Year Review and they support the findings of this report.

## VI. RESULTS OF THE FIVE-YEAR REVIEW

During Site visits made in the fall of 1991 and again in August 1992, the RPM made the following observations relating to the current status of the water line:

- The roadway over the water line remains in good repair. There is no apparent settling over the water line trench which could indicate potential breaks or leaks in the water line.
- Based on recent groundwater sampling results, the plume of contaminated groundwater has not moved into areas previously identified as uncontaminated. Therefore, there is no need to extend the water line beyond its current service area.
- There are no new homes along Auburn Road in the area where residents were required to be connected to the water line.

In summary, the water line constructed in response to the 1986 ROD and 1987 Administrative Order continues to be protective of human health and the environment. No specific deficiencies were identified during this Five-Year Review.

EPA believes the Five-Year Reviews should continue at this Site since hazardous substances, pollutants or contaminants which are above levels allowed for unlimited use or unrestricted exposure remain at the site. Accordingly, we plan to begin another Five-Year Review in September 1997 or as part of a Five-Year Review in response to the Remedial Actions identified in the 1989 ROD, whichever is sooner.

EPA will add this Five-Year Review Report to the Auburn Road Landfill Site Administrative Record pursuant to Section 300.825(a)(1) of the NCP.